DOCUMENT RESUME

ED 100 070 EA 006 694

TITLE	Developing a Standardized Educational Program Audit (SEPA): A Formative Look in 1974.
INSTITUTION	Florida State Dept. of Education, Tallahassee. Div. of Elementary and Secondary Education.
PUB DATE	Oct 74
NOTE	51p.; Reprinted October 1974
EDRS PRICE	MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS	*Educational Accountability; *Educational Assessment; Educational Development; Educational Innovation; Educational Research; *Evaluation Criteria; Problem Solving; *Program Administration; Program Development; Program Effectiveness; *Program Evaluation
IDENTIFIERS	*Audits; Elementary Secondary Education Act Title III; ESEA Title III; Florida; SEPA; Standardized Educational Program Audit

ABSTRACT

This document provides information about the development of a quality control procedure that adds a new capability to program management. The procedure, the Standardized Educational Program Audit (SEPA), is being developed by the Florida Department of Education for use with Elementary Secondary Education Act Title III development projects. This report is intended to acquaint educational managers and technicians with this particular approach to the audit problem, with the procedure that has been produced at this point in its development, with its effectiveness, and with technical problems yet to be overcome. SEPA can help in the early detection of technical problems not only within development projects but also among them. Being able to detect and measure the incidence of problems common among projects will help the department of education increase its responsiveness to the needs of district developers. The use of problem information by projects will increase their effectiveness and efficiency. It is expected that once SEPA is fully developed and tested it will be adaptable for quality control applications in a variety of other program operations. (Author/DN)

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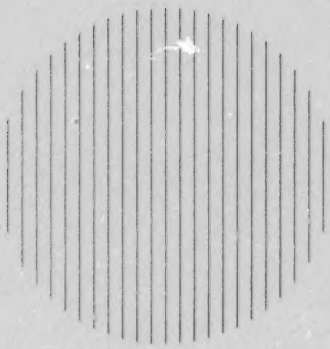

sepa

DEVELOPING A STANDARDIZED EDUCATIONAL PROGRAM AUDIT

A FORMATIVE LOOK IN 1974

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Educational Innovations Section
Bureau of Research and Information
Division of Elementary & Secondary Education

Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner

Reprinted October 1974

EA 006 694

FOREWORD

Developing management information and systematic decision-making capabilities are high priorities in Florida education today. New capabilities and applications are being developed in management and quality control. The purpose of such development is three-fold:

- To increase the responsiveness of educational programs and services to the needs of the individuals or groups being served.
- To improve the effectiveness of educational programs and services in meeting human needs.
- To enhance the efficiency with which resources are used in providing programs and services.

This document provides formative information about the development of a quality control procedure which adds a new capability to program management. The procedure, the Standardized Educational Program Audit (SEPA), is being developed by the Educational Innovations Section for use with ESEA, Title III development projects. SEPA offers great promise in the early detection of technical problems not only within development projects, but also among them. Being able to detect and measure the incidence of problems common among projects will provide a powerful new tool. By using problem incidence information, the Department of Education will be able to increase its responsiveness to the needs of district developers. The use of problem information by projects will increase their effectiveness and efficiency.

Once fully developed and tested, SEPA should be adaptable for quality control applications in a variety of other program operations.

Ralph D. Turlington

Ralph D. Turlington
Commissioner of Education

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PART I

THE STANDARDIZED EDUCATIONAL PROGRAM AUDIT: WHAT AND WHY?

Context of the Problem

In contemporary education, the development project is a popular tool for problem solving. For example, Title III of the Elementary and Secondary Education Act provides developmental capital to local school districts to solve persistent educational problems in innovative ways. The nature and scope of development projects have great variability; however, there are generic decisions which must be made both during the course of project development and at its conclusion. These decisions are of great importance in the quality control of developmental endeavors and in the sharing of project-developed practices and products with the educational community.

In projects with varying degrees of complexity and sophistication, problems in production, operation, and management often occur. If these problems are allowed to go uncorrected, their consequences may prevent the completion or success of the project mission. If this should occur, the educational community would be deprived of important information. Educators would not know whether the innovative idea being developed and tested was a workable and productive solution to the problem being addressed. Therefore, systematic management and quality control of project functions becomes imperative.

The responsibility for problem detection must be shared. Each project must include procedures for process and outcome evaluation within its management design. The execution of these procedures becomes a local responsibility. The state agency responsible for the general management of all such projects within the state must have a co-equal responsibility. A state agency is in a unique position to collect and analyze aggregate information about project-related problems from which strategies for general improvement of projects can be derived. The responsibility of the state agency is two-fold. First, the state agency must help to detect and correct problems in individual projects, and second, it must help discover problems common to groups of projects and then to devise means to resolve common problems and to prevent their occurrence in future projects, when possible.

State of Problem Areas

To discharge its responsibilities in the quality control of development projects, the Florida Department of Education's Office of Educational Innovations has completed its second phase in the development of a Standardized Educational Program Audit (SEPA). The conceptual design,

results, application, and proposed modification are the substance of this technical report.

The three fundamental problems addressed in the development of SEPA are:

* How can problems internal to project production, operation, and management be detected through the use of a standard procedure when great diversity exists among the focus, sophistication, complexity, and development status of projects?

* How can problematic information collected from many projects be aggregated at the state level to determine the incidence of common technical problems?

* How does a state agency use information showing common sets of problems to design and deliver corrective intervention to projects?

The Relationship of the Standardized Educational Program Audit to Other Quality Control Functions

SEPA is not a singular, discrete quality control mechanism. It is one of four interrelated quality control functions. These four functions are evaluation, monitoring, auditing, and validation. While these functions differ in when, how, and by whom they are applied, they are each designed to obtain and provide critical decision-making information at key points in project planning, operation, and diffusion. A brief explanation of each function is important in understanding both its purpose and the procedural design of SEPA.

Evaluation

Evaluation is a set of internal quality control procedures for a project. In projects, evaluation is:

* Used to determine the presence, nature, extent, significance, and course of learner changes in relation to project intervention (i.e., whether the learner-oriented problem was solved).

* Used to make formative and summative decisions about the tools and processes of the intervention being developed and tested.

* Used as a management tool to check and regulate production and operation activities.

Evaluation tasks are performed by the project staff, district evaluation services, and/or by a contractor. Information obtained is used by the project and shared with the state agency and other audiences.

Monitoring

Monitoring, as used by the state agency, is external to the project. It is process-oriented and consists of two basic strategies. First is the expert review and negotiation of project plans. This strategy is used to detect and correct potential faults in: basic design; planned activities; legal compliance; and general communications between the project and the state agency. The second strategy is informal on-site reviews of the projects performed by DoE program specialists and staff members from the Educational Innovations Section.

Auditing

Auditing is external to projects, formal in nature, and process-oriented. SEPA is used to detect problems in project production, operation, and management at the project level. At the state agency level, summarized audit findings are used to diagnose broad areas of problems among projects. The audit procedure is conducted by management and program experts trained to serve as audit teams. Auditors must be independent of local agency and state agency affiliations. In conducting their on-site activities, auditors observe, verify, and report existing conditions within projects. Compiled reports are submitted to the state agency, which in turn, delivers them to local agency decision-makers and project personnel.

Validation

Validation is outcome or accomplishment oriented. It is used to verify and certify the success-effectiveness, efficiency, and portability of the practice and products developed by a project. The validation procedure is conducted by management, measurement, and program experts trained to serve as validators. Validation teams are independent of the project, local agency, state agency, and ESEA, Title III. Validation is a quality control procedure applied before project-developed practices and products are released for state and national dissemination/diffusion.

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Purpose of the Technical Report

This technical report is intended to acquaint educational managers and technicians with a particular approach to the audit problem, the procedure which has been produced at this point in development, its effectiveness, and technical problems yet to be overcome.

Reactions and criticisms by readers of this report are solicited. Responses or requests for additional information may be sent to:

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PART II

BASIC DESIGN AND OPERATION OF THE 1974 STANDARDIZED EDUCATIONAL PROGRAM AUDIT

The Audit Premise

The premise of auditing is one of verification. The history of auditing can be traced to the days of the Roman Empire when accounts of property and debts were read to independent listeners who verified the accuracy of the records; hence, the term "audit." The independent inspection of records or conditions for the purposes of verfication and reporting is common practice in fiscal operations. Only recently has the concept of independent inspection and verification been adapted for educational program applications.

Auditing is not evalution in the traditional sense. The auditor's function is to detect and report discrepant conditions or problems--not to correct the problems when discovered.

Prerequisite Conditions for a Standardized Educational Program Audit Procedure

The design incorporated in this reported SEPA procedure is based on three fundamental assumptions:

1. That there are common critical concerns for all development projects, regardless of variability in program focus, stage of development, complexity or sophistication in design;

2. That these common elements are addressed by and incorporated in all projects; and

3. That these common elements can be reduced and defined into sets of observable phenomena from which standard audit items can be generated.

Development projects engaged in educational problem-solving (managed by the Educational Innovations Section of the Florida Department of Education) all have standardized sets of planning and management elements. Each project design includes: specific learner need statements; criteria for need resolution; a defined problem; a mission statement; terminal performance specifications for learner change; program component and product specifications; a project management schedule; a

project management log; and evaluation procedures with common data targets (e.g., learner performance change, significance of change, cause of change, functional utility measurements of program components and products). These common elements for project design and management are standardized for operation in Florida's Manual for Applicants and Grantees (Florida Department of Education, 1974), better known as the ESEA, Title III PACE Manual. The importance of this standardization in format and content cannot be minimized. Without such standardization in design and procedure, there cannot be a SEPA procedure. The re-design of Florida's project management system in 1972 was a prerequisite to the current audit design.

A diagram of the format and content of project plans is presented as DIAGRAM 1: Organizational Format for Grant Applications on the following page. The diagram is taken from the 1974 PACE Manual.

Basic Design of the 1974 SEPA Protocols: Instrumentation and Procedure

Instrument Content and Design

The common elements and conditions expected to be found in all projects managed through the Educational Innovations Section provided a basis for the generation of specific audit items. First, five areas were identified as important areas in which technical problems could occur in projects. These areas were: Project Management (General); Production Management; Measurement of Change; Product Development; and Program Operation. Then, specific items in each of the five areas were constructed to provide a means of observing specific conditions in projects.

Instrument Format Design

After determining the content elements for the audit instrument, the next steps were the formatting of items and the designing of procedures for item use by auditors. Two approaches to item formatting were used in the instrument design.

The first item format was the "expected versus observed conditions comparison format." Thirty-three (33) of the thirty-seven (37) items in the five sections of the instrument used this format. In this format, the auditor was given an expected condition with which he then compared the conditions he observed on-site. If the observed and expected conditions matched, then a "consistency" was reported. If the expected condition was partially--but not completely--fulfilled, then a "discrepancy" was reported and explained. If an applicable, expected condition was not found to exist, then an "omission" was reported. When

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ORGANIZATIONAL FORMAT FOR GRANT APPLICATIONS

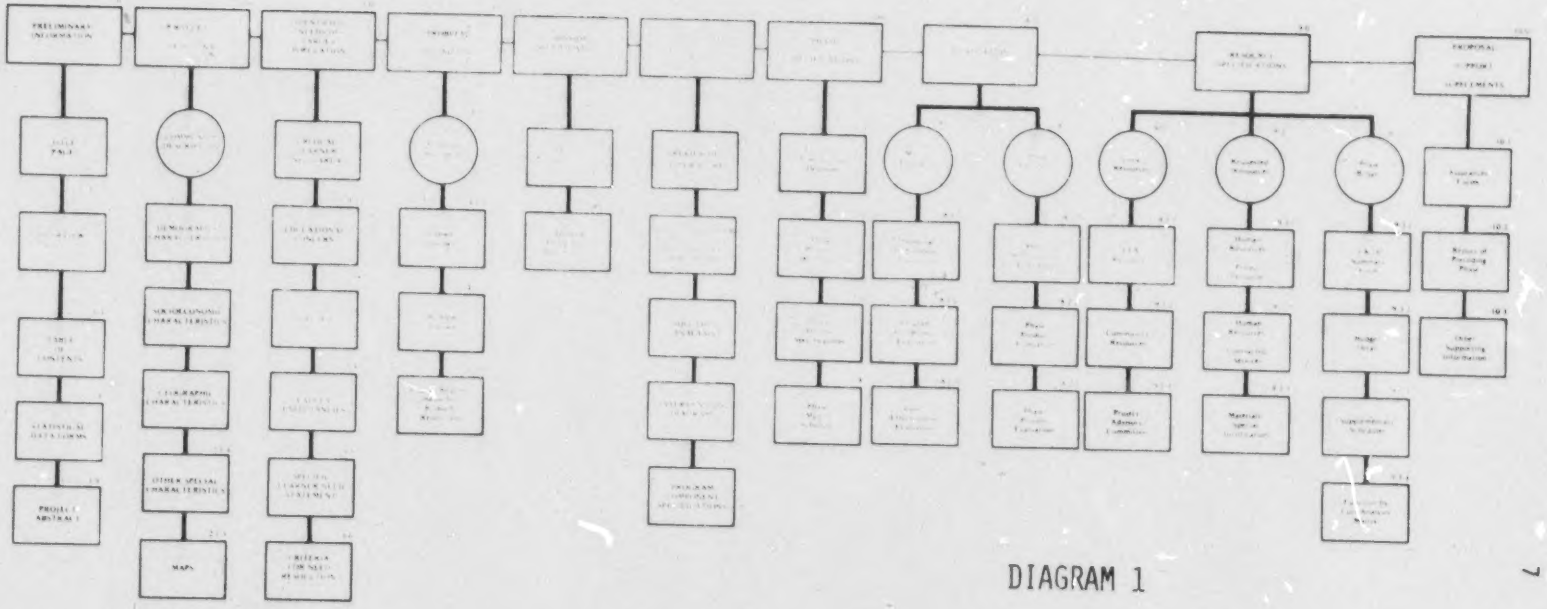

DIAGRAM 1

IDENTIFICATION OF GRANT APPLICATION CONTENTS BY TYPE OF GRANT APPLICATION

TYPE OF GRANT APPLICATION	CONTENT OF GRANT APPLICATION BY SECTION, COMPONENT, SUBCOMPONENT
DEVELOPMENTAL	X X X

an expected condition was determined not applicable to a project, then the non-applicability was reported and explained. The auditor occasionally reported "additional observations" related to the expected conditions. Additional observations reported or explained conditions, rather than the auditor's judgment or opinion on the matter.

The "expected versus observed condition comparison format" was used to standardize response modes for the thirty-three (33) items using this format. Standardized response modes provided the capability of summarizing responses across projects on given items or item groupings. This format also was useful in reducing auditor subjectivity in applying items and in reporting conditions as observed.

The procedure used by auditors in applying items in the "expected versus observed condition comparison format" is illustrated in DIAGRAM 2: Audit Observation and Reporting Procedure on the following page.

In order to simplify the on-site recording of data for auditors, an instrument form was devised which would allow the auditor to check the appropriate status finding for an expected condition by a given audit item. Adjacent space was provided in which the auditor could record observations and notes for later use in the preparation of the audit report. The instrument form was printed on 8½" by 14" paper to provide space for such recording. A reduced example of a page from the instrument form is provided in Exhibit 1, Instrument Form Example Page on page ten.

The other item format used in the audit instrument was a narrative or constructed response format. In this format, the auditor was given a statement or question to which he was to respond. While such responses tend to elicit more subjective responses, it was thought that constructed responses to general questions might provide a source of useful information that was broader in scope than the type of information obtained in the first format. Four items, two in Section V-B and two in Section V-C, used a constructed response format. A summary compliance question at the end of the audit report also used the constructed response format.

Inventory of Audit Items from the 1974 SEPA Instrument

Presented below is the set of audit items used in the 1974 SEPA instrument. The items are presented under their respective area headings and are listed in the order of presentation in the field instrument. The items are used in Part III of this report for the presentation of results. However, the items are described by key-word subjects in Part III to save space.

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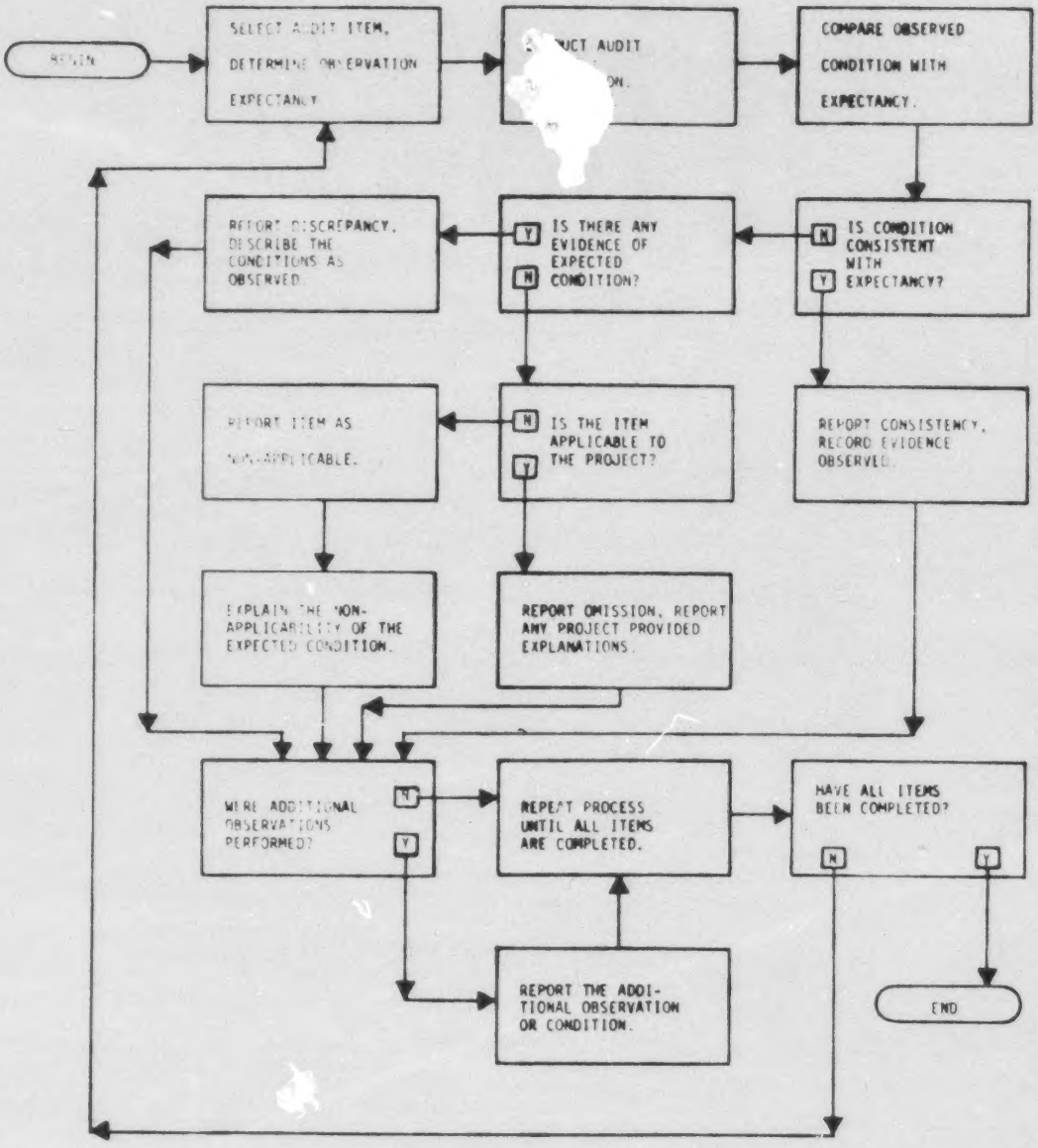
SELECT AUDIT ITEM, DETERMINE OBSERVATION EXPECTANCY
COMPARE OBSERVED CONDITION WITH EXPECTANCY.
IS CONDITION CONSISTENT WITH EXPECTANCY?
IS THERE ANY EVIDENCE OF EXPECTED CONDITION?
REPORT DISCREPANCY, DESCRIBE THE CONDITIONS AS OBSERVED.
REPORT CONSISTENCY, RECORD EVIDENCE OBSERVED.
IS THE ITEM APPLICABLE TO THE PROJECT?
REPORT ITEM AS NON-APPLICABLE.
REPORT OMISSION, REPORT ANY PROJECT PROVIDED EXPLANATIONS.
EXPLAIN THE NON-APPLICABILITY OF THE EXPECTED CONDITION.
WERE ADDITIONAL OBSERVATIONS PERFORMED?
REPEAT PROCESS UNTIL ALL ITEMS ARE COMPLETED.
HAVE ALL ITEMS BEEN COMPLETED?
REPORT THE ADDITIONAL OBSERVATION OR CONDITION.
END

DIAGRAM 2. AUDIT OBSERVATION AND REPORTING PROCEDURE
(USED WITH EXPECTED VS. OBSERVED CONDITION ITEMS)

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EDUCATIONAL PROGRAM AUDIT INVENTORY					SECTION I: PROJECT MANAGEMENT
AUDIT OBSERVATIONS/INQUIRIES AREA PROJECT MANAGEMENT FUNCTIONS	STATUS REPORT				CITE EVIDENCE TO SUPPORT STATUS REPORT REPORT ANY ADDITIONAL OBSERVATIONS
	C	D	O	NA	
1. The project director can produce a project management schedule which specifies: A. the expected dates on which major production, operation, and management activities are to be completed; and B. the projected flow of the occurrence of activities over time and in sequential relationship.					
2. The project director can produce a project management log which: A. describes and documents major project events as they occur in chronological order; B. records the actual dates on which major production, operation, and management activities were initiated and completed (internal events) and the dates on which major external events affecting the nature or direction of project activities occurred; C. records decision alternatives for major decisions made in response to events and the actual decision made from alternatives; and D. describes the rationale for any significant departure from planned activities, established completion dates and/or flow patterns.					

C - Consistency; D - Discrepancy; O - Omission; NA - Not Applicable

EXHIBIT I

Section One: Project Management

1. The project director can produce a project management schedule which specifies:

   a. the expected dates on which major production, operation, and management activities are to be completed; and

   b. the projected flow of the occurrence of activities over time and in sequential relationship.

2. The project director can produce a project management log which:

   a. describes and documents major project events as they occur in chronological order;

   b. records the actual dates on which major production, operation, and management activities were initiated and completed (internal events) and the dates on which major external events affecting the nature or direction of project activities occurred;

   c. records decision alternatives for major decisions made in response to events and the actual decision made from the alternatives; and

   d. describes the rationale for any significant departure from planned activities, established completion dates, and/or flow patterns.

3. The project director can produce evidence that progress (status) information relative to scheduled activities has been reviewed formally by the project staff on a recurring cycle.

4. The project director can produce evidence that progress (status) information relative to scheduled activities has been reviewed formally by LEA decision-makers at the district level on a recurring cycle.

5. The project director can produce evidence that progress (status) information relative to scheduled activities has been reviewed formally by a project advisory committee on a recurring cycle.

6. The project director can produce evidence that progress (status) information relative to scheduled activities has been or will be reviewed periodically by other audiences (e.g., other participating agencies, parents of the beneficiaries, DoE program specialists, etc.) during the project grant phase.

7. The project director can provide a written plan which establishes the current and future provisions for the continuation

of project endeavors (contingent upon established effectiveness) after federal funds are withdrawn.

Section Two: Production Management

1. Each product to be produced during the current grant phase has:

   a. a specified function for which it is to be used when complete;

   b. a set of requirements to be met in production; and

   c. a set of standards which must be met when the finished product is to be used.

2. For each product, the production activities (or tasks) and their associated milestone dates are included in the project management schedule.

3. The project director can provide evidence that the current production status for each of the products being prepared during this grant phase is within two weeks of its scheduled production status as set forth in the project management schedule. (This applies to a delay, not to an advance.)

4. If any delay greater than two weeks exists between the actual production status and the expected (scheduled) production status of a product, then that delay is recorded in the project management log.

5. For each product being developed for intervention with the target population, there is a specified evaluation procedure to assess:

   a. the completeness of the product in relationship to the specified criteria or standards for the product; and

   b. the functional utility of the product in relationship to the specified criteria or standards for the product.

6. The evaluation procedure(s) designed to assess the completeness and functional utility of each product is (are) being fully implemented and is (are) being conducted on schedule.

7. The evaluation findings for each product are being fully documented as those findings are determined.

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8. The project director can provide evidence that the functional utility of any and all products (designed for intervention use with learners) has been demonstrated through appropriate evaluation procedures before being disseminated to persons, agencies, or institutions other than those participating in the development or testing of said products.

9. All learner intervention products still in formative stages of development are marked to indicate that their functional utility has not been demonstrated through appropriate evaluation procedures and are thereby subject to extensive revision or elimination from intervention usage.

Section Three: Measurement of Change

1. Each terminal performance specification (learner change objective) contains the necessary information to render it measurable at a given point in time (i.e., the specifications include: (1) what portion of the target population will be able to do what; (2) at what level of performance; and (3) under what conditions).

2. Each terminal performance specification (learner change objective) has an identifiable evaluation design which when conducted will provide the information necessary to determine whether the expected portion of the target population demonstrated the expected performance at the level(s) specified (i.e., the actual attainment of the objective).

3. Each terminal performance specification (learner change objective) is provided with evaluation procedures which will yield information for:

   a. determining the statistical significance of learner change; and

   b. rendering conclusions about the nature and cause of learner change in relationship to the program of intervention.

4. Each terminal performance specification (learner change objective) has identifiable and documented data collection procedures for implementing the evaluation design(s) reviewed in Items 2 and 3 above.

5. If sampling procedures were used to structure the data collection process for the summative evalution of a terminal performance specification (learner change objective):

   a. the rationale (for sample size, selection, assignment, and assumed equivalency between comparison groups) is presented in project documents; and,

b. there is no evidence to suggest that the statistical assumptions established for the sampling procedure(s) have been violated in implementation.

6. The instrument(s) (whether commercially or locally developed) used in the collection of data for the measurement of learner change for each terminal performance specification (learner change objective) is (are):

   a. appropriate for the target population;

   b. sensitive to measure the range and scope of the behavior of concern;

   c. has (or will have) an established and documented estimate of its (their) reliability; and

   d. can be judged as valid for measuring the behavior(s) to be measured.

7. For each terminal performance specification (learner change objective) undergoing summative evaluation, there is evidence indicating that the personnel responsible for implementing the data collection procedures are competent (certified, qualified, and/or specifically trained through inservice activities) to conduct the data collection tasks to which they are assigned.

8. For each terminal performance specification (learner change objective) undergoing summative evaluation, there is evidence that the data collection and processing procedures are being managed in an accurate manner at key points in collection and processing.

9. For each learner performance specification (learner change objective) there are identifiable and documented data analysis procedures being used to implement its evaluation design. The data analysis procedures when fully implemented will yield information for determining:

   a. whether the expected portion of the target population demonstrated the expected behavior(s) at the level(s) specified;

   b. whether the measured change in learner behavior has statistical significance; and

   c. whether the nature and cause of change in learner behavior is attributable to program intervention.

10. All summative evaluation procedures and tasks are being implemented in accordance with the approved grant application and project management schedule.

Section Four: Product Development

1. Based upon a review of each program intervention product developed to date there is evidence to suggest that each product is matched directly to one or more of the specific learner needs and problems identified in the approved grant application.

2. Based upon a review of each program intervention product developed to date, there is no evidence to suggest that all requirements established for each product in the approved grant application have failed to be met.

3. Based upon a review of each program intervention product developed to date, there is no evidence to suggest that all functional utility standards established for each product in the approved grant application have failed to be met.

Section Five: Program Operation (A)

1. There is evidence to show that the number and type of direct participants recorded in the approved grant application are participating in program activities.

2. There is evidence to show that the qualifications of personnel paid from ESEA, Title III funds match the personnel specifications set forth in the approved grant application.

3. There is no evidence to suggest that the project personnel paid with ESEA, Title III funds are being used by the LEA for purposes other than the accomplishment of the project mission and its associated functions.

4. There is evidence to show that provisions were made for students and/or personnel from non-profit private schools to participate in program activities (correspondence, minutes, records, etc.).

Section Five: Program Operation (B)

1. Identify and describe the organizational point(s) in the classroom, school, and/or district organization at which project intervention occurs.

2. Identify and describe the basic unit(s) in which intervention is delivered.

Section Five: Program Operation (C)

(Prepare a narrative answer to the two following questions)

1. Do all program components interrelate one with another, demonstrating both uniformity of fit and integrity as a whole?

2. To what extent does the program of intervention, as a comprehensive solution, afford coverage for the learner needs and problems addressed by the project?

Operational Procedures Used to Conduct the SEPA Mission for 1974

The following sub-sections provide the reader with a general overview of the processes involved in conducting the SEPA mission for development projects in 1974.

Project Preparation

Thirty (30) ESEA, Title III development projects were audited in early 1974. Each project manager and his district superintendent were notified eight weeks prior to the audit and given pertinent information about it. Project managers prepared "pre-audit information packages" for the audit team to be assigned to the project. The pre-audit information package contained the following items:

1. A key personnel inventory for the project, including members of the project advisory committee and project beneficiaries.

2. The current approved grant application with any addenda or amendments.

3. Quarterly reports for the current budget period.

4. The project management schedule.

5. The project management log entries from the first day of the current budget period to the date of request.

6. Results of evaluation procedures conducted during the current grant period.

7. Evaluation and audit reports from the preceding budget period.

8. Evaluation information forms for each terminal performance specification (learner change objective).

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9. Completed product summary sheets for all intervention products completed by the date of request.

All pre-audit information packages were prepared and submitted to the Educational Innovations Section prior to the auditor training session.

Contract Preparation

In order to expedite the recruitment of auditors and the processing of paperwork, a contract (DoE #740-091) was prepared and executed between the Department of Education and the Florida Educational Research and Development Council, Inc., a private, non-profit educational corporation. The contractor handled all matters relating to the recruitment of auditor candidates, contracting with auditors, payment of honoraria and travel expenses. The Educational Innovations Section was the sole judge for candidate selection, acceptability of work, and authorization of payment to auditors.

Selection/Training/Assignment of Auditors

Auditor candidates were submitted by the contractor for review and selection. Two auditors were selected for each of the thirty (30) projects to be audited. One member of the audit team was required to possess training and experience in management and evaluation. The other team member was required to possess training and experience in the focus area of the assigned project. All auditors selected came from either school districts or universities. Fifty-three (53) of the sixty (60) auditors selected were holders of doctorates. Twenty-one (21) of the management auditors had been auditors of projects in 1973.

A one-day training session was required of selected candidates to serve as an auditor. The purpose of the training session was to orient the "trainees" to the audit procedures and to allow audit team members to become acquainted. Instruction was provided in observation/reporting procedures on an item by item basis to auditors in their speciality groups. Overall reporting procedures were explained and time lines provided. The following subjects were covered during the course of the training session:

1. Project planning and management designs contained in the new PACE Manual.
2. The audit as one of four quality control functions.
3. The SEPA Mission for 1974.
4. General responsibilities of the auditor.
5. Auditor decorum on-site.

6. Channels of communication
7. Pre-audit preparation tasks
8. The SEPA design
9. Audit team responsibilities
10. SEPA Report Drafts
11. SEPA Report Elements
12. Basic rules for report preparation

The pre-audit information packages submitted previously by project managers were distributed to audit teams. Planning time for audit teams was provided at the close of the training session.

Auditor assignments to teams and projects were based on the following factors:

1. appropriate speciality
2. independence of local district or project affiliation
3. accessibility to the project site
4. special factors.

Special factors pertained to unique aspects of the project being audited. As an example, for a bi-lingual education project in Dade County, both auditors assigned were speakers of Spanish. The on-site audit was conducted in Spanish and reported in English.

Pre-Audit Activities

Following the training session, audit teams reviewed the pre-audit information packages and prepared their audit questions, needs for additional information, and interviews to be conducted during the on-site phase. Audit teams were charged with the responsibility of scheduling the on-site audit activities at a time mutually convenient for both the audit team and the project staff. The audit was to be accomplished during the month of February on any two consecutive weekdays. A calendar of audit events for 1974 is provided on page nineteen.

	AUDIT EVENT	DATE
1.	Project Managers and their respective district Superintendents notified of 1974 SEPA Plans.	12/14/73
2.	Contractor submits list of auditor candidates to Educational Innovations Section (EIS).	12/21/73
3.	EIS submits list of selected auditor candidates to contractor.	12/21/73
4.	Auditor candidates notified of Training Session.	12/21/73
5.	All Pre-Audit Information Packages received from Project Managers.	01/18/74
6.	Auditor Training Session conducted.	01/23/74
7.	On-site auditing period begins.	01/30/74
8.	On-site auditing period ends.	03/01/74
9.	All audit report drafts submitted by audit teams to Educational Innovations Section.	03/08/74
10.	Report delivery schedule established with Project Managers and Superintendents.	03/15/74
11.	Begin report delivery schedule established with Project Managers and Superintendents.	04/01/74
12.	Complete report delivery phase.	04/30/74
13.	Begin technical report preparation.	05/01/74

On-Site Activities

During the two-day period of on-site audit time, the audit team members were required to complete the thirty-eight (38) audit observations contained in the SEPA protocols. During this phase, evidence was examined and interviews were conducted in order to determine and verify existing conditions. When completed, the audit team exited: no exit interview was conducted. The only permitted reporting of audit findings was the official SEPA report, returned to district and project personnel by members of the Educational Innovations Staff.

Report Preparation by Audit Teams

Following the on-site activities each audit team compiled its findings into a report draft and submitted it to the Educational Innovations Section. Each of the thirty (30) reports were prepared in the following format:

1. Cover page with general project and auditor information;
2. Auditor assurances page including signed statements for report accuracy and project independence;
3. Audit activities description;
4. Audit inventory, Sections I-V;
5. Summary of Detected Problems;
6. Summary Opinion of Project Compliance with the terms and conditions of its grant application; and
7. Supporting information including a contact record of persons interviewed and the vitae of the auditors.

Upon receipt of each report draft, the Educational Innovations Section Staff reviewed the document for completeness, accuracy, internal consistency, and propriety of content. Errors in reports were corrected with auditors via telephone. Statements of opinion presented in the Audit Inventory, Sections I-V were removed. When all corrections were made, the report was typed in final manuscript form and reproduced for delivery.

Delivery of Reports to District/Project

While final reports were being prepared, a report delivery schedule was established. A two hour meeting was scheduled for each audit report in the district where the project was located. The district superintendent director of federal programs, program directors, and the project manager and project staff were requested to attend the reporting session.

A staff member from the Educational Innovations Section conducted the reporting session. During the session, the SEPA concept was explained, report findings were reviewed, detected problems were discussed, and joint measures for problem correction were established.

PART III

FIELDTEST OF THE 1974 STANDARDIZED EDUCATIONAL PROGRAM AUDIT: SOME FINDINGS, CONCLUSTIONS, AND RECOMMENDATIONS

Plan for the Formative Evaluation of the 1974 SEPA Procedure

The formative evaluation plan for the 1974 SEPA was designed to answer three basic questions:

1. Did the application of SEPA result in the detection of technical problems in individual projects?

2. Could the data collected from individual projects be aggregated in a form which would permit measurement of the incidence of technical problems among projects?

3. Based on the overall results of SEPA, what portions of the instrument and procedure should be revised for 1975?

In order to answer these questions, data from SEPA reports were collected and analyzed in a variety of ways.

For individual projects, performance data were collected and presented in summarized tabular form. This tabulation permitted an overall review of individual project performance across thirty-three (33) objective audit items as well as a review of the performance of thirty (30) projects on a given item. From this summary, percentage scores for positive performance were determined for each project. The percentage scores were cast into intervals to produce a graphic frequency distribution of performance scores. The distribution permitted a view of general project performance across the thirty-three (33) objective audit items. This information then was used to answer question #1 above.

To answer question #2, two tasks were performed: (1) the construction of a "problem incidence profile" which yielded the rate of occurrence of technical problems among audited projects, and (2) the construction of a matrix which depicted the performance of project groups on the five sections of the audit inventory. The "project group by section performance matrix" reported in each of its cells:

a. the rate of reported consistencies;

b. the combined rate of reported discrepancies and omissions; and

c. the rate of item non-applicability per section per project group.

The rates of section non-applicability for project groups was included with the other information to answer question #3.

Analyses of responses to the five narrative items from the audit inventory were performed also. The five narrative items were examined in two ways: for the content of response and for the quality of response. This provided additional information for questions #2 and #3.

The results of the formative evaluation of the 1974 SEPA procedure are reported below in this section. The reader is advised to consider the findings presented herein as formative, rather than conclusive, in nature.

Fieldtest Data Collection

The data presented in this section were collected by two-member audit teams on two consecutive days in the month of February, 1974. Thirty (30) ESEA, Title III projects were audited. Projects audited were in one of five funding phases. Three projects (O-1-A) had been operational for approximately six weeks when the audits occurred. Nine (9) projects (O-1-B) had been operational for approximately eight months when the audits were conducted. Eight (8) projects (O-2) were in their second operational phase and seven (7) projects (O-3) were in their third operational phase. Three (3) projects (DM-1), validated in 1973, were operating as demonstration/diffusion centers, the first year for such projects.

Problem Detection Within Projects

Audit Findings for Projects

The audit findings obtained from the thirty (30) projects audited 1974 are presented in Table 1. This table provides the findings reported by the audit teams for the thirty-three (33) objective (expected versus observed condition) items found in the five sections of the audit inventory.

Table 1 provides a status report (consistency - C, discrepancy - D, omission - O, not-applicable - NA, or auditor deletion - X) for each of the thirty-three (33) items and for each of the thirty projects. (The deletion of an item by an auditor was performed when the response mode for an item did not include an NA response alternative. Therefore, such a deletion of an item is a report of item non-applicability.) Two types of summary information are provided for individual projects at the bottom of Table 1. The first summary gives the number of consistencies, discrepancies, omissions, not applicables, and deletions

for each of the audited projects. By subtracting the number of discrepancies and omissions from thirty-three and then dividing the difference by thirty-three, a percentage score was obtained. The second summary (bottom line of Table 1) provides a percentage score for each project.

As can be seen in Table 1, the ranges for status reports for projects were as follows:

*range of consistencies reported:	6 - 33 per project;
*range of discrepancies reported:	0 - 17 per project;
*range of omissions reported:	0 - 13 per project; and
*range for not applicable or auditor deleted items:	0 - 10 per project.

The percentage or "proficiency" scores for projects ranged from 18% to 100% with a mean score of 72.3% for the thirty projects audited.

TABLE I

SUMMARY OF PROJECT PERFORMANCE ON OBJECTIVE PROTOCOL ITEMS
(PERCENTAGE SCORES INCLUDED)

EXPECTED VS. OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (33 ITEMS IN FIVE SECTIONS)	AUDITED PROJECTS BY FUNDING STATUS GROUPS (N=30)																											
	O-1A			O-1B								O-2								O-3							DM-1		
	130-73007	160-72004	580-72004	010-73002	73-08254-0	050-73004	130-73006	330-73001	500-72005	580-73003	650-73002	670-73002	050-73003	080-73002	130-72006	240-73004	420-73002	430-73001	500-73004	520-73002	060-73004	070-73002	130-73004	140-73001	71-07133-0	71-07108-2	520-73001	73-08269-0	73-08255-0	640-73003
	AUDIT INVENTORY SECTION I: PROJECT MANAGEMENT (GENERAL)																											
1. Management Schedule	C	C	C	C	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	C	C	D	C	C
2. Management Log	C	C	C	C	D	C	C	D	D	C	C	C	C	O	C	D	D	C	O	D	O	D	D	D	O	C	C	D	C	D
3. Communication-Project Staff	C	C	C	C	O	C	C	D	C	C	C	C	C	C	C	C	C	O	D	D	C	C	C	D	C	C	C	C	C	C
4. Communication-Decision-makers	C	C	D	C	C	C	D	C	D	C	C	C	D	D	C	C	D	C	D	D	C	C	C	O	C	C	C	C	C	C
5. Communication-Advisory Committee	C	C	D	C	D	C	C	C	D	C	C	C	O	D	C	C	O	C	C	O	O	D	C	C	C	C	C	C	D	O
6. Communication-Other Audiences	C	C	D	C	C	C	C	C	D	C	C	C	O	C	C	C	D	D	C	C	C	C	C	C	C	C	C	C	C	C
7. Continuation Contingency Plan	D	D	C	O	O	X	O	O	D	D	D	D	O	O	C	D	O	O	D	O	C	D	C	D	C	O	C	D	C	D
	AUDIT INVENTORY SECTION II: PRODUCTION MANAGEMENT																											
1. Product Specifications	C	C	C	C	O	O	C	C	C	C	C	C	D	C	C	C	D	C	O	O	NA	C	D	C	D	C	C	D	D	C
2. Production Schedule	C	D	C	D	O	O	C	C	C	C	C	C	C	C	C	C	C	NA	O	O	NA	C	C	D	C	C	C	C	C	C
3. Production Status	D	D	C	C	D	O	C	C	C	C	O	C	C	C	C	D	O	NA	D	O	NA	D	D	C	C	C	C	D	D	C
4. Delay Documentation	O	C	C	NA	O	O	NA	NA	NA	C	O	C	C	O	C	C	O	NA	O	O	NA	D	O	O	C	C	C	C	C	C
5. Product Evaluation Plan	C	C	C	C	O	O	C	C	C	D	O	C	O	D	C	C	O	C	O	O	NA	NA	D	NA	C	C	C	D	D	C
6. Evaluation Implementation	NA	NA	C	C	O	O	C	C	C	D	O	C	NA	O	C	C	O	D	O	O	NA	D	D	NA	C	C	C	C	C	C
7. Evaluation Documentation	NA	NA	C	C	D	O	C	C	C	C	O	C	NA	O	NA	C	O	C	O	O	NA	C	C	NA	C	C	C	C	C	C
8. Product Dissemination Control	NA	NA	NA	NA	D	O	NA	NA	NA	NA	NA	NA	NA	NA	C	C	NA	C	C	O	C	NA	NA	NA	C	NA	C	C	NA	C
9. Field-test Product Marking	NA	NA	C	C	C	O	O	C	NA	D	O	C	D	O	NA	C	O	C	D	O	NA	C	NA	NA	C	NA	C	NA	C	C

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TABLE 1 (Cont'd.)

SUMMARY OF PROJECT PERFORMANCE ON AUDITED PROJECTS
(PERCENTAGE SCORES TABULATED)

EXPECTED VS. OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (31 ITEMS IN FIVE SECTIONS)	AUDITED PROJECTS BY FUNDING STATUS GROUPS (N=30)																											
	C-A			C-1B									C-2								C-1						DM-1		
	130-73007	160-73004	580-73004	010-73002	73-08754-0	050-73006	130-73006	130-73901	500-72005	580-73003	650-73007	670-73002	090-73005	080-73902	130-73006	340-73004	420-73002	430-73003	500-73004	520-73002	060-73004	070-73002	130-73004	140-73501	71-07134	71-07136	520-73001	73-08264-1	73-08253-0	640-73003
	AUDIT INVENTORY SECTION II: MEASUREMENT OF CHANGE																											
1. Objective Measurability	C	C	C	C	D	D	C	C	D	D	D	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	X	C
2. Attainment Design	C	D	C	C	C	C	D	D	C	C	C	C	C	C	C	C	C	C	D	D	C	C	C	D	C	C	C	X	C
3. Causal/Comparative Design	C	C	C	D	C	C	D	C	D	D	D	C	C	C	C	C	D	D	D	D	C	C	C	D	C	C	C	NA	X	C
4. Data Collection Procedures	C	C	C	C	C	C	D	C	D	C	C	C	C	C	C	C	C	C	D	D	C	C	D	D	C	C	C	D	X	C
5. Sampling Procedures	NA	NA	D	NA	D	C	D	NA	NA	D	C	C	NA	D	C	C	NA	NA	NA	D	C	C	NA	C	D	C	C	C	X	NA
6. Instrumentation	C	C	C	C	D	C	D	C	D	D	C	C	C	D	C	C	C	C	D	D	D	C	C	D	D	C	C	D	X	X
7. Personnel Qualifications	C	C	C	C	D	C	D	C	X	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	C	C	C	X	C
8. Data Accuracy Verification	NA	NA	D	C	D	D	D	C	X	D	C	C	C	D	C	C	C	C	D	D	C	C	D	D	D	C	C	C	X	C
9. Analysis Procedures	D	C	C	D	D	D	D	D	D	D	D	C	C	D	C	C	D	D	D	D	C	C	D	C	C	C	C	D	X	C
10. Implementation Status	NA	C	C	C	D	D	D	C	X	C	C	C	C	D	C	C	C	C	D	D	C	D	D	C	C	C	D	C	X	D
	AUDIT INVENTORY SECTION IV: PRIVATE DISINVESTMENT																											
1. Product Continuity with Need	D	X	X	C	D	X	C	X	X	C	C	C	C	C	C	C	C	C	C	C	C	C	C	NA	C	C	C	C	C	C
2. Product Completeness	X	X	X	C	D	X	C	X	X	C	C	C	C	D	D	D	C	D	C	C	C	D	C	D	D	C	C	C	C	D
3. Product Utility	X	X	X	C	D	X	C	X	X	C	D	C	C	D	C	D	C	D	C	C	C	C	D	D	D	C	C	C	C	C
	AUDIT INVENTORY SECTION V: PROGRAM OPERATION																											
1. Learner Participation	C	C	C	C	D	D	C	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C
2. Personnel Qualifications	C	C	C	C	C	C	C	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3. Personnel Utilization	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4. Private Sector Participation	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	NA	C	C	C	C	C	C	C	C

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TABLE I (Cont'd.)

SUMMARY OF PROJECT PERFORMANCE ON OBJECTIVE PROTOCOL ITEMS
(PERCENTAGE SCORES INCLUDED)

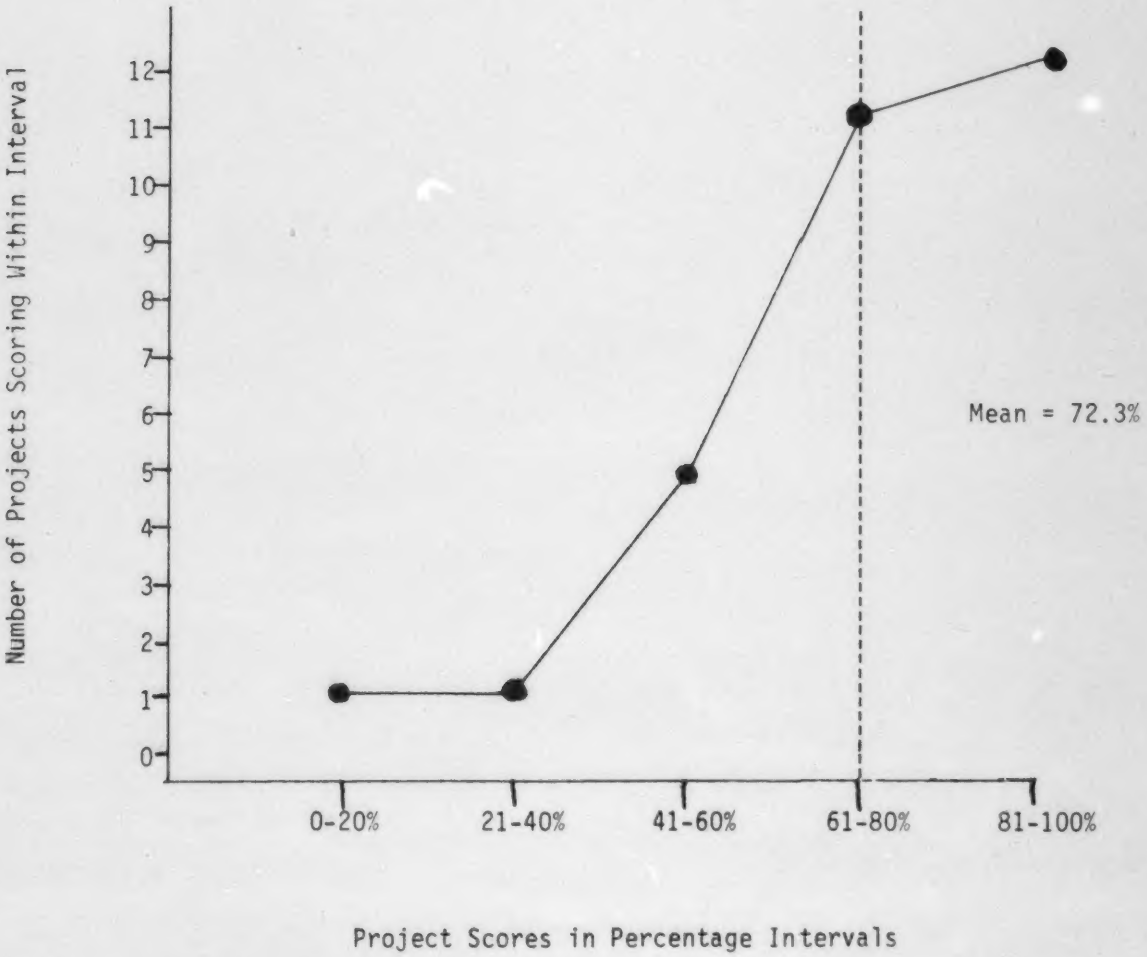
EXPECTED VS. OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (33 ITEMS IN FIVE SECTIONS)	AUDITED PROJECTS BY FUNDING STATUS GROUPS (N=30)																												
	O-1A			O-1B									O-2							O-3							DM-1		
	130-73007	160-72004	580-72004	010-73002	73-08254-0	050-73004	130-73006	330-73001	500-72005	580-73003	650-73002	670-73002	050-73003	080-73002	130-72006	240-73004	420-73002	430-73001	500-73004	520-73002	060-73004	070-73002	130-73004	140-73001	71-07133-0	71-07108-2	520-73001	73-08269-0	73-08255-0	640-73003
	PROJECT STATUS SUMMARY (I-VA)																												
NO. CONSISTENCIES	19	20	24	26	19	15	19	20	12	22	19	30	22	13	31	29	15	24	8	6	22	22	18	11	25	30	32	20	18	25
NO. DISCREPANCIES	3	4	5	3	15	5	1	6	11	10	7	1	3	13	0	4	8	2	17	14	1	8	10	14	7	0	1	11	4	5
NO. OMISSIONS	1	0	0	1	9	9	11	1	0	0	6	1	4	6	0	0	8	3	7	13	2	0	2	2	1	1	0	0	0	1
NO. NOT APPLICABLE	7	6	1	3	0	0	2	3	4	1	1	1	4	1	2	0	2	4	1	0	8	3	3	6	0	2	0	2	1	1
NO. ITEM DELETIONS	3	0	3	0	0	4	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1
PERCENTAGE SCORES (%)	88	80	85	88	21	58	61	79	67	70	61	94	79	42	100	88	52	85	58	18	91	76	64	52	76	97	94	67	88	82

Figure 1 provides a frequency distribution of project scores in percentage intervals. One project scored in the 0-20% interval; one project in the 21-40% interval; five projects in the 41-60% interval; eleven projects in the 61-80% interval; and twelve projects in the 81-100% interval. The mean percentage score was 72.3%, thus indicating that half of the projects audited were operating at or above the 72% proficiency level.

FIGURE 1

DISTRIBUTION OF AUDIT SCORES FOR PROJECTS

(NUMBER OF PROJECTS = 30)



Considerations in Data Interpretation

The interpretation of audit findings merits additional discussion.

When an auditor marks a discrepancy for an audit item, it indicates that a discrepant condition exists. The marking of a discrepancy does not indicate magnitude or extent. For this reason, the auditor must report also the conditions observed when reporting a discrepancy.

Differences in degree or extent may occur in discrepancies reported for two different projects on the same audit item. For example, a project with thirty (30) learner change objectives could have a discrepancy reported for missing a step in a data verification process for one objective. Another project having only two learner change objectives with multiple problems in data verification on both objectives likewise would have a discrepancy reported. The extent of the discrepancy in the second project is relatively greater than the extent of the discrepancy in the first project. Although both projects have discrepancies in kind, they differ in extent. Thus, discrepancies are "project-specific" in degree of occurrence.

Just as there are differences in the extent of discrepancies between projects on a common item, there are differences in the magnitude of potential consequence in discrepancies on different items for the same project. A discrepancy found in sampling procedures in a project's evaluation may be of greater magnitude of consequence than a reported error in management log documentation. Thus discrepancies are "item-specific" in magnitude of potential consequence on the project mission.

In summary, discrepancies are "project-specific" in extent of occurrence and "item specific" in magnitude of potential consequence. Discrepancies can be summed within and among projects in kind, but not degree or magnitude.

Summarization and Conclusions

The audit reports provided a unique source of independent information about projects. In discussing audit findings with the managers of the individual projects audited, it was found that the problems, once reported, then were recognized and accepted by the project managers with few exceptions. The scoring procedures applied to project data enabled the Educational Innovations Section to easily locate projects with extreme deficits in performance. Individual identification of such projects was the first step in providing individualized corrective intervention.

On the basis of (1) the nature and amount of information collected about the performance of individual projects, (2) the reaction of project managers in receiving audit information, and (3) the facility with which the state agency could locate and intervene with projects having extreme reported deficits, the SEPA procedure is considered an effective means of detecting technical problems within projects.

Problems Encountered Within the SEPA Procedure

Two main problems were encountered in the 1974 SEPA procedure. The first problem pertained to the auditor's collection and consideration of evidence from which status reports for items were rendered. Four project managers reported the occurrence of errors on from one to three items in the set of thirty-three (33) objective items. Three auditor errors were responsible for this problem:

(1) The auditor failed to request information which was available and appropriate to satisfy an item expectancy;

(2) The auditor failed to accept provided and appropriate evidence which would satisfy an item expectancy; or

(3) The auditor ignored or overlooked information which authorized a change in project activity, and reported the authorized change as a discrepancy.

Obviously, these auditor errors impair the reliability of reported data. However, the incidence rate of auditor errors of this nature reported by project managers was low (i.e., project managers from four projects reported such errors for one to three items per project).

There is one other known auditor error that should not go unmentioned Occasionally, an auditor (especially a new auditor) is unsure about reporting a discrepancy or a consistency for an item. This usually occurs when there is marginal evidence of a consistency or a minor evidence of a discrepancy. The error that occurs is a "benefit of the doubt" error in which a consistency is reported without appropriate accompanying explanation. The "benefit of the doubt" error reduces the sensitivity of the audit procedure as a problem detection mechanism. The incidence rate for this type of error is unknown. One may speculate that marginal discrepancies are being reported as consistencies since most reported discrepancies are not marginal in nature.

In order to improve the efficiency and effectiveness of the SEPA procedure, auditor errors must be reduced and maintained at the lowest possible level. To accomplish this, auditor training in the future will include specific training and practice on (1) soliciting and judging evidence, and (2) decision-making and reporting in marginal situations.

Problem Detection Among Projects

Aggregate Audit Findings (Objective Audit Items)

The audit findings obtained from the thirty audited projects were aggregated and analyzed in two different ways. The first aggregate analysis was performed to construct a "problem incidence profile" of detected problems among projects. The second aggregate analysis was performed to construct a "problem incidence profile" of detected problems among projects. The second aggregate analysis was performed to examine the performance of projects in different funding status groups on the five sections of the audit inventory.

Table 2, "The Problem Incidence Profile" provides a summary of project performance adjusted for the applicability of items to projects. Column A provides a listing of the thirty-three (33) objective items from the five sections of the audit inventory of the audit protocols. Column B gives the number and percent of projects in which a given item was applicable. The range of item applicability was from thirty projects or 100% to eighteen projects or 60% for Item Five of Section III which pertained to sampling procedures in learner performance evaluation. (Only 60% of the thirty projects used sampling procedures in their evaluation designs). Column C provides the number and percent of projects for which a consistency was reported. The consistency rates for items ranged from 100% to 23%. The 23% consistency rate was found for Item Seven, Section I pertaining to a contingency plan. Column D provides the number and percent of projects for which a discrepancy or omission was reported for each of the thirty-three items. The range of discrepancy rates found were from 0% to 77%, the complement of rates for Column C. Column C illustrates the relative discrepancy rates for each of the thirty-three (33) objective items, thus creating a profile of incidence rates of technical problems reported for the thirty (30) audited projects.

The Problem Incidence Profile reveals the incidence rates of common problems among projects. A 35% criterion can be applied to the profile to identify those problems common to approximately one-third or more of the projects audited. When applied, this criterion identifies seventeen items or problems in four of the five audit inventory sections on which 35% or more of the projects had reported deficiencies. These items are listed below by audit inventory sections.

TABLE 2
PROBLEM INCIDENCE PROFILE

(A) EXPECTED VERSUS OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (33 ITEMS IN FIVE SECTIONS)	APPLICABILITY ADJUSTMENT (B) PROJECTS IN WHICH ITEM IS DETERMINED TO BE APPLICABLE		(C) PROJECTS IN WHICH A CONSISTENCY WAS REPORTED FOR AN APPLICABLE ITEM		(D) PROJECTS IN WHICH A DISCREPANCY OR OMISSION WAS REPORTED FOR AN APPLICABLE ITEM		(G) INCIDENCE RATES FOR TECHNICAL PROBLEMS REPORTED IN PROJECTS (INCIDENCE RATES FOR ITEM-BASED PROBLEMS DERIVED FROM REPORTED DISCREPANCIES, OMISSIONS ON ITEMS ACROSS PROJECTS, SEE RATES IN COLUMN D)
	NO.	%	NO.	%	NO.	%	10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
AUDIT INVENTORY SECTION I: PROJECT MANAGEMENT (GENERAL)							
1. Management Schedule	30	100	27	90	3	10	
2. Management Log	30	100	15	50	15	50	
3. Communication-Project Staff	30	100	24	80	6	20	
4. Communication-Decision-Makers	30	100	21	70	9	30	
5. Communication-Advisory Committee	30	100	19	63	11	37	
6. Communication-Other Audiences	30	100	25	83	5	17	
7. Continuation Contingency Plan	30	100	7	23	23	77	

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(A) EXPECTED VERSUS OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (33 ITEMS IN FIVE SECTIONS)	APPLICABILITY ADJUSTMENT (B) PROJECTS IN WHICH ITEM IS DETERMINED TO BE APPLICABLE		(C) PROJECTS IN WHICH A CONSISTENCY WAS REPORTED FOR AN APPLICABLE ITEM		(D) PROJECTS IN WHICH A DISCREPANCY OR OMISSION WAS REPORTED FOR AN APPLICABLE ITEM		(E) INCIDENCE RATES FOR TECHNICAL PROBLEMS REPORTED IN PROJECTS (INCIDENCE RATES FOR ITEM-BASED PROBLEMS DERIVED FROM REPORTED DISCREPANCIES/OMISSIONS ON ITEMS ACROSS PROJECTS; SEE RATES IN COLUMN D)
	NO.	%	NO.	%	NO.	%	10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
AUDIT INVENTORY SECTION II: PRODUCTION MANAGEMENT							
1. Product Specifications	29	96	19	65	10	35	
2. Production Schedule	28	93	21	75	7	25	
3. Production Status	28	93	15	53	13	47	
4. Delay Documentation	24	80	13	54	11	46	
5. Product Evaluation Plan	27	90	15	55	12	45	
6. Evaluation Implementation	25	83	14	56	11	44	
7. Evaluation Documentation	24	80	17	70	7	30	
8. Product Dissemination Control	12	40	9	75	3	25	
9. Field-Test Product Revision	21	70	10	47	9	43	

(A) EXPECTED VERSUS OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (33 ITEMS IN FIVE SECTIONS)	APPLICABILITY ADJUSTMENT (B)		(C)		(D)		(E) INCIDENCE RATES FOR TECHNICAL PROBLEMS REPORTED IN PROJECTS (INCIDENCE RATES FOR ITEM-BASED PROBLEMS DERIVED FROM REPORTED DISCREPANCIES, OMISSIONS ON ITEMS ACROSS PROJECTS; SEE RATES IN COLUMN D)
	(B) ITEMS IN WHICH ITEM IS JUDGED NOT APPLICABLE TO BE EXPECTED		(C) PROJECTS IN WHICH DISCREPANCY OR OMISSION WAS REPORTED FOR APPLICABLE ITEM		(D) PROJECTS IN WHICH DISCREPANCY OR OMISSION WAS REPORTED FOR NOT APPLICABLE ITEM		
	NO.	%	NO.	%	NO.	%	10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
AUDIT INVENTORY SECTION III MEASUREMENT OF CHANGE							
1. Objective Measurability	29	96	20	68	9	32	
2. Attainment Design	29	96	22	75	7	25	
3. Causal/Comparative Design	28	93	17	60	11	40	
4. Data Collection Procedures	29	96	22	75	7	25	
5. Sampling Procedures	18	60	11	61	7	39	
6. Instrumentation	28	93	17	60	11	40	
7. Personnel Qualifications	28	93	25	89	3	11	
8. Data Accuracy Verification	26	86	15	57	11	43	
9. Analysis Procedures	29	96	12	41	17	59	
10. Implementation Status	27	89	17	62	10	38	

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PROBLEM INCIDENCE PROFILE
(Cont'd.)

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(A) EXPECTED VERSUS OBSERVED CONDITION AUDIT ITEMS BY AUDIT INVENTORY SECTIONS (33 ITEMS IN FIVE SECTIONS)	APPLICABILITY ADJUSTMENT (B) PROJECTS IN WHICH ITEM IS DETERMINED TO BE APPLICABLE		(C) PROJECTS IN WHICH A CONSISTENCY WAS REPORTED FOR AN APPLICABLE ITEM		(D) PROJECTS IN WHICH A DISCREPANCY OR OMISSION WAS REPORTED FOR AN APPLICABLE ITEM		(E) INCIDENCE RATES FOR TECHNICAL PROBLEMS REPORTED IN PROJECTS (INCIDENCE RATES FOR ITEM-BASED PROBLEMS DERIVED FROM REPORTED DISCREPANCIES, OMISSIONS ON ITEMS ACROSS PROJECTS, SEE RATES IN COLUMN D)
	NO.	%	NO.	%	NO.	%	10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
AUDIT INVENTORY SECTION IV: PRODUCT DEVELOPMENT							
1. Product Congruence With Need	23	76	21	91	2	9	
2. Product Completeness	24	80	15	62	9	38	
3. Product Utility	24	80	15	62	9	38	
AUDIT INVENTORY SECTION V: PROGRAM OPERATION (A)							
1. Learner Participation	30	100	22	73	8	27	
2. Personnel Qualifications	30	100	25	83	5	17	
3. Personnel Utilization	30	100	28	93	2	7	
4. Private Sector Participation	29	96	29	100	0	0	

LISTING OF PROBLEMS WITH REPORTED
INCIDENCE RATES OF 35% OR GREATER

SECTION	ITEM	SUBJECT	DISCREPANCY RATE
I PROJECT MANAGEMENT	2	Management Log	50%*
	5	Communication-Advisory Committee	37%
	7	Continuation Contingency Plan	77%*
II PRODUCTION MANAGEMENT	1	Product Specifications	35%*
	3	Production Status	47%*
	4	Delay Documentation	40%*
	5	Product Evaluation Plan	45%*
	6	Evaluation Implementation	44%*
III MEASUREMENT OF CHANGE	3	Causal-Comparative Design	40%
	5	Sampling Procedures	39%
	6	Instrumentation	40%
	8	Data Accuracy Verification	43%
	9	Analysis Procedures	59%
	10	Implementation Status	38%
IV PRODUCT DEVELOPMENT	2	Product Completeness	38%*
	3	Product Utility	38%*

The incidence rate for the problems reported on nine of the above items can be attributed to a change in guidelines. The 1974 SEPA procedure was designed to correspond with the new guidelines presented in the 1974 revision of Florida's PACE Manual. Many on-going projects, caught in the transition to new guidelines, had not implemented completely the newly required changes at the time the audit was conducted. Those items so affected are marked with an asterisk (*) in the above listing.

It is anticipated that the incidence rate for these items will be reduced significantly in the 1975 SEPA findings.

The problems with high incidence rates reported for the Measurement of Change Section of the audit inventory are of the greatest concern in the management of projects. These problems are associated with the production of credible evidence of the effectiveness of projects in solving the various problems they are addressing. Without credible evidence of success, projects cannot be "validated" nor subsequently shared with the educational community without engaging in hucksterism. Resolution of these problems is one of the utmost importance to both the project and the state agency. Awareness of the existence and prevalence of the problem is the first step in designing and delivering corrective intervention.

One other aggregate analysis was performed using the thirty-three (33) objective items. Aggregated data were analyzed in a two-way matrix in order to examine the objective items in the five sections of the audit inventory. Three types of information were placed in the twenty-five cells of the matrix:

(1) the rate of reported consistencies per cell;

(2) the rate of discrepancies, plus omissions per cell; and

(3) the rate of non-applicable items per cell.

The data are presented in Table 3.

The purpose of this analysis was two-fold. The first purpose was to locate high discrepancy/omission rates for projects in the different operation phase groups. This information allows the selection of specific project groups for which to provide special corrective intervention of a basis of an operational phase commonality. The three greatest cell discrepancy/omission rates were as follows:

(1) 0-2 projects for Project Management, 50%;

(2) 0-2 projects for Production Management, 47%; and

(3) 0-1-B projects for Measurement of Changes, 42%.

These two project groups (0-2 and 0-1-B) each contained three projects with extremely discrepant scores in relationship to other projects in that group. These extreme scores increased the mean discrepancy rates for each group on the aforementioned audit inventory sections. Each of the three projects in the two groups had unusual circumstances surrounding them. In four of the six projects, the project managers had been changed in the course of the past year. The possible relationship between the

replacement of project managers and the frequency of audit-detected problems tends to emphasize the central importance of the project manager and the requisite skills for the position.

On the basis of the nature and incidence of problems found among projects and their subsequent verification through other means, it is concluded that the 1974 SEPA was an effective means of problem detection among projects.

TABLE 3

ANALYSIS OF PROJECT GROUP PERFORMANCE
ON AUDIT INVENTORY SECTIONS

STATUS REPORT RATES BY EPA SECTIONS	PROJECT GROUPS BY FUNDING STATUS				
	0-1-A (N=3)	0-1-B (N=9)	0-2 (N=8)	0-3 (N=7)	DM-1 (N=3)
SECTION I: PROJECT MANAGEMENT					
% +	76	68	50	75	67
% -	24	30	50	25	33
% NA	0	2	0	0	0
SECTION II: PRODUCTION MANAGEMENT					
% +	52	50	38	52	70
% -	15	35	47	18	23
% NA	33	15	15	30	7
SECTION III: MEASUREMENT OF CHANGE					
% +	70	51	62	71	36
% -	13	42	32	21	20
% NA	17	7	6	2	44
SECTION IV: PRODUCT DEVELOPMENT					
% +	0	52	67	67	77
% -	0	14	33	28	23
% NA	100	34	0	5	0
SECTION V: PROGRAM OPERATION					
% +	100	78	81	92	100
% -	0	22	19	4	0
% NA	0	0	0	4	0

DESIGNATIONS - % + = Rate of Consistencies per Cell
% - = Rate of Discrepancies + Omissions per Cell
% NA = Rate of Non-Applicable Items per Cell

The second purpose of the analysis in Table 3 was to locate high non-applicability rates within the five sections for projects in different operational stages. Such information indicated the lack of content validity for various sections of the audit inventory when used for projects in differing phases of operation. Two high non-applicability rates were found:

(1) O-1-A projects for Product Development, 100% non-applicable; and

(2) DM-1 projects for Measurement of Change, 44% non-applicable.

Section IV - Product Development was designed for project products which were completed and deployed for use. O-1-A projects, having been operational for only six weeks at the time of the audit, had no completed products to be inspected. The items designed for Section III - Measurement of Changes were designed for student performance evaluation. DM-1 projects work with potential adopters of practices and products. The data targets for the evaluation of DM-1 projects were not congruent with the data targets for the evaluation of DM-1 projects were not congruent with parallel sections with alternate items appropriate for such projects must be developed for the 1975 audit inventory.

Aggregate Audit Findings (Narrative Audit Items)

Section V of the audit inventory dealt with Program Operation. Section V contained four narrative items to be prepared by the program specialist on the audit team. Two of these items requested descriptions of the organizational point(s) at which intervention is provided to learners (e.g., an "intensive intervention program of high-risk learners" may be installed within a classroom, elementary level, grade one). The other item relating to intervention (V-B-2) requested a brief description of the basic unit in which intervention occurs. (Basic unit descriptions should have contained resource, procedure, and time factors).

An appraisal of the descriptions provided was performed using three judgmental criteria: completeness, clarity, and accuracy. The results of this appraisal are presented in Table 4.

TABLE 4

APPRAISAL OF NARRATIVE DESCRIPTIONS REGARDING
PROJECT INTERVENTION PRESENTED IN REPORTS
(SECTION V-B)

CHARACTERIZATION OF REPORT NARRATIVES			
COMPLETE, CLEAR ACCURATE		AMBIGUOUS, INCOMPLETE INNACURATE	
NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
V-B-1: POINT(S) OF INTERVENTION			
11	36	19	64
V-B-2: BASIC UNIT(S) OF INTERVENTION			
17	56	13	44

As can be seen in Table 4, the descriptions provided were judged as complete, clear, and accurate in 36% of the reports for Item V-B-1, and in 56% of the reports for Item V-B-2.

There were two narrative items in Section V-C of the audit inventory. The program auditor was asked to provide narrative answers for opinion questions pertaining to the solution being developed by the project for the problem it was addressing. The questions were as follows:

V-C-1: Do all program components interrelate with one another demonstrating both uniformity of fit and integrity as a whole: and

V-C-2: To what extent does the program as a comprehensive solution afford coverage for the learner needs and problems addressed?

An appraisal of the descriptions was performed using the same judgmental criteria: completeness, clarity, and accuracy. The results are presented in Table 5.

TABLE 5

APPRAISAL OF NARRATIVE DESCRIPTIONS REGARDING
PROJECT SOLUTION PRESENTED IN REPORTS
(SECTION V-C)

CHARACTERIZATIONS OF REPORT NARRATIVES			
COMPLETE, CLEAR ACCURATE		AMBIGUOUS, INCOMPLETE INNACURATE	
NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
V-C-1: INTEGRITY OF SOLUTION COMPONENTS			
17	56	13	44
V-C-2: COMPREHENSIVENESS OF SOLUTION			
15	50	15	50

The appraisal revealed that the descriptions were judged as complete, clear, and accurate in 56% of the reports for Item V-C-1, and in 50% of the reports for Item V-C-2.

Tables 4 and 5 show that about half of the auditor narrations prepared in response to the four items in Section V were characterized as ambiguous, incomplete, or inaccurate. This casts doubt on both the information provided in reports and the format used in Section V to request such information for reports. It is suspected that the format of the items in question did not define adequately the information sought, or did not direct the auditor to report the information in an appropriate manner.

To solve this problem, an alternative format will be used. Objective response items with a more narrow scope will be developed along with improved directions and illustrative examples. A review of the narrative description responses to the two questions in V-C was made. In the review, auditor responses were interpreted as either positive or negative to the questions asked by the items. The results of this review are presented in Table 6 on page 42.

TABLE 6

INTERPRETED NARRATIVE RESPONSES REPORTED
SECTION V-C (SOLUTION)

INTERPRETATION OF NARRATIVE RESPONSES			
AFFIRMATIVE RESPONSE		NEGATIVE RESPONSE	
NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
V-C-1: INTEGRITY OF SOLUTION COMPONENTS			
28	92	2	8
V-C-2: COMPREHENSIVENESS OF SOLUTION			
29	96	1	4

The review and interpretation revealed that affirmative responses were given in 92% of the reports for Item V-C-1 (integrity of solution components) and in 96% of the reports for Item V-C-2 (comprehensiveness of the solution).

The audit report contained one additional narrative item. The item was to be jointly prepared by both members of the audit team. The item requested a summary opinion indicating the degree to which the project was being conducted in accordance with the terms and conditions of the grant application.

A review of these opinion statements was performed. In the review process, the narrative statements were interpreted and sorted into three general response categories:

1. those indicating an affirmative compliance response;
2. those giving an ambivalent compliance response; and
3. those giving a negative compliance response.

The obtained results are presented in Table 7.

TABLE 7

INTERPRETED NARRATIVE RESPONSES REPORTED
FOR GRANT COMPLIANCE SUMMARY

INTERPRETATION OF NARRATIVE RESPONSES					
AFFIRMATIVE COMPLIANCE RESPONSE		AMBIVALENT COMPLIANCE RESPONSE		NEGATIVE COMPLIANCE RESPONSE	
NUMBER	%	NUMBER	%	NUMBER	%
24	80	5	16	1	4

The review and interpretation revealed that affirmative compliance responses were reported for 80% of the projects, that ambivalent responses were reported for 16% of the projects, and that a negative compliance response was given for one of the thirty projects audited.

The findings reveal that in five instances audit teams failed to answer the grant compliance question with an affirmative or negative response. Such ambivalent responses possibly may be attributed to three causes:

1. an attempt by the audit team to evade the question, perhaps to avoid giving a negative response;

2. dichotomous opinions held by the two members of the audit team which were not resolved; or

3. imprecise narration by the writers.

To solve the problem of ambivalent meaning in response to the opinion of grant compliance item, the response format will be modified for the 1975 SEPA Protocols. Boxes for affirmative or negative responses will accompany the item. Space will then be provided for a narrative justification for the response given by the auditors in the box. This modification should reduce the opportunity for evasion and should force imprecise writers to address the central point. Procedures also will be included for auditors to employ if the two members of the audit team should hold contrary opinions on the grant compliance issue.

Basis for Corrective Intervention

The audit findings presented herein have highlighted certain specific items and general areas in which discrepancies in project performance occurred. In the perceptions of project managers, auditors, and staff of the Educational Innovations Section such performance discrepancies are considered "problems." Some of the identified problems potentially could prevent the completion or success of project missions. The test of such information is not its collection alone, but its application to a productive use.

If the purpose of SEPA is the detection of problems, then the productive use of problem information is the design and delivery of corrective intervention. Both the project manager and the state agency have a role and responsibility to fulfill in the process of problem correction. The state agency must assist project managers in analyzing problems and exploring solution alternatives. The project managers then must select and implement the best alternatives for their projects. The state agency through monitoring and the expert review and negotiation of plans, must determine whether the necessary changes have been implemented. Both parties eventually must determine if the problem has been solved.

The state agency has an additional responsibility to fulfill. Due to its unique purview over many projects, the state agency must design and deliver corrective intervention for common problems of major consequence and high incidence among projects. Traditional intervention approaches for such problems are workshops, training sessions, and modifications in guidelines.

Between January 1, and July 30, 1974, training sessions for all project managers, small group workshops, and technical assistance for individual projects were provided. The review and negotiation of subsequent grant applications by the Educational Innovations Staff has shown that many audit detected problems have been addressed with corrective procedures.

From this initial application of intervention measures and a cursory examination of changes in projects, it appears that audit-produced information can be applied effectively in treating detected problems. However, the best indication of the effectiveness of corrective intervention will be provided in the 1975 SEPA findings. A comparison of performance results from 1974 to 1975 on the same items applied to projects by the same or similar audit teams should indicate the extent to which detected problems have been solved. The rate at which problems are solved should provide evidence of the effectiveness of the corrective intervention provided.

Potentialities of the Standardized Educational Program Audit

With the development of a standardized audit procedure which provides aggregate, objective, and cumulative information about the performance of projects, new and productive uses must be found for the information obtained. Perhaps procedures for preventive and corrective intervention can be developed and their effectiveness tested in future projects and selected problem-solving endeavors. One conclusion can be drawn at this point: the full range of productive data usage from the SEPA procedure now is unknown. Intuitively, it would seem that a standardized audit procedure with the capability of providing problem detection information across a variety of educational activities at a given moment in time could have many potential applications in the broad area of educational management.